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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,967	01/29/2002	Den'etsu Sutoo	218964US2	3525

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EXAMINER	
KRONENTHAL, CRAIG W	

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/057,967	SUTOO ET AL.	
	Examiner	Art Unit	
	Craig W. Kronenthal	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-5 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-5 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 29 January 2002 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 1/29/02, 1/17/03.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on January 30, 2001. It is noted, however, that applicant has not filed a certified copy of the 2001-021699 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Sutoo et al. ("Quantitative mapping analyzer for determining the distribution of neurochemicals in the human brain"). (hereinafter Sutoo)

Regarding Claim 1: Sutoo discloses a tissue mapping method comprising placing a tissue sample (brain slice) on a stage (motorized scanning stage), measuring information (measured fluorescence intensity) at a plurality of points (microareas) on the sample using a measuring device (photometer) while moving the stage two-

dimensionally, inputting signals measured by the measuring device to a memory (host computer) and storing the signals therein, and creating a tissue map (displayed quantitatively as a color or monochromatic image) by obtaining two-dimensional information of the sample from the memory (p. 162, Section 2.1 Overview, second paragraph),

wherein, after reacting a reagent A' specific to a substance A (immunohistochemically stained for a first substance) with the tissue sample (brain slice) to be mapped, a distribution image of the reaction areas of the reagent A' is created by scanning the sample in the two-dimensional directions, and subsequently, after reacting a reagent B' specific to a substance B (stained again for the second substance) with the same sample (same brain slice), a distribution image of the reaction areas of the reagent B' is created by scanning the sample in the two-dimensional directions, wherein these steps are repeatedly performed a necessary number of times, thereby creating distribution images of the reaction areas of different types of reagents on the same sample (p. 165-166, Section 3.1 Hardware operation, third paragraph).

Regarding Claim 2: Sutoo discloses the tissue mapping method according to claim 1, wherein the reagent is an antibody or an antibody labeled with a fluorescent substance [The immunohistochemically staining is done with an antibody labeled with a fluorescent substance p. 167, Section 4.2 Immunohistochemical staining).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutoo.

Regarding Claim 3: Sutoo discloses a tissue map analyzer comprising:

a measuring device (photometer) for measuring information at one point on a tissue sample [The fluorescent intensity is measured at the point which is illuminated by an excitation beam (p. 162, Section 2.1 Overview, second paragraph, lines 3-9).],

a stage which moves two-dimensionally with the sample being placed thereon [The brain slice is placed on a motorized scanning stage which moves in x and y directions (p. 164, Section 2.4 Scanning stage).],

a memory for storing information concerning coordinates and signal intensities at a plurality of points on the sample to which measured signals from the measuring device are input while moving the stage (p. 165, Section 3.1 Hardware operation, paragraph 2, lines 1-4),

a processor for calculating analytical values of the data stored in two different divisional memories [The difference between the first and second sets of data is calculated (p. 165, Section 3.1 Hardware operation, third paragraph, lines 10-12).], and

an image processor for creating a distribution image of each reagent based on the data stored in each divisional memory in the memory and creating a distribution image based on the analytical values calculated by the processor (p. 165, Section 3.1 Hardware operation, third paragraph, lines 10-12).

Sutoo does not disclose a plurality of divisional memories provided in the memory, each of which stores data on distribution of the reaction areas of each reagent reacted with the same tissue sample obtained by scanning the sample in the two-dimensional directions. However the examiner takes official notice that one of ordinary skill in the art would find it obvious to modify Sutoo's system to store distribution data on divisional memories within the host computer instead of external memories (p. 165, Section 3.1 Hardware operation, second paragraph, lines 1-7). One would be motivated to make this modification because the data is saved after each measurement is performed (see Figure 5). Furthermore, the reason cited for using external memories is because of limited internal memory, which suggests that divisional memories may be added to the internal memory (p. 165, Section 3.1 Hardware operation, second paragraph, lines 1-7).

Regarding Claim 4: Sutoo discloses the tissue map analyzer according to claim 3, but does not disclose the divisional memories. As explained with regards to claim 3, the examiner takes official notice that it would be obvious to one of ordinary skill in the art to modify Sutoo's system to use a separate provisional memory for storing data on the distribution of the reaction areas of separate reagents. Sutoo discloses storing each distribution separately since the data is transferred automatically after each analysis (p. 165, Section 3.1 Hardware operation, second paragraph, lines 1-7). It would be obvious to one of ordinary skill to replace the external storages with internal divisional storages. Furthermore, the reason cited for using external memories is because of limited internal memory, which suggests that divisional memories may be added to the internal memory (p. 165, Section 3.1 Hardware operation, second paragraph, lines 1-7).

Regarding Claim 5: Sutoo discloses the tissue map analyzer according to claim 3 or 4, further comprising:

a sample positioning means for positioning the same tissue sample at a specific position of the stage [The area of the sample to be measured can be entered into the system controller (p. 165, Section 3.1 Hardware operation, lines 1-3).].

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Rava et al. (PN 5,201,318) is cited for teaching generating spectral infromation from laser induced fluorescence of tissue.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig W. Kronenthal whose telephone number is (571) 272-7422. The examiner can normally be reached on 8:00 am - 5:00 pm / Mon. - Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (571) 272-7414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

6/30/05
CWK

JINGGE WU
PRIMARY EXAMINER